APPARATUS AND METHODS FOR COOLING

SEMICONDUCTOR INTEGRATED CIRCUIT PACKAGE STRUCTURES

Abstract of the Disclosure

Apparatus and methods are provided for thermally coupling a semiconductor chip directly to a heat conducting device (e.g., a copper heat sink) using a thermal joint that provides increased thermal conductivity between the heat conducting device and high power density regions of the semiconductor chip, while minimizing or eliminating mechanical stress due to the relative displacement due to the difference in thermal expansion between the semiconductor chip and the heat conducting device.